

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-24 (canceled).

25(original). A sandwich dielectric structure having a reduced thick film stress comprising:

a first dielectric layer having a thickness between 100 to 700 nm formed on a substrate;

81 a liquid-phase-deposition (LPD) silica layer having a thickness between 5 to 100 nm formed on the first dielectric layer; and

a second dielectric layer having a thickness between 100 to 700 nm formed on the liquid phase deposited (LPD) silica layer.

26(original). The structure according to claim 25, wherein said first dielectric layer and said second dielectric layer are a low-K dielectric material of methyl silsesquioxane (MSQ), or hydrogen silsesquioxane (HSQ).

27(original). The structure according to claim 26, wherein said first dielectric layer and said second dielectric layer are methyl silsesquioxane (MSQ).

28(original). The structure according to claim 25, wherein said LPD silica layer is a fluorine-containing silica layer comprising 6-10 atom% of fluorine.

29(original). The structure according to claim 28, wherein said LPD silica layer is a fluorine-containing silica layer and said fluorine-containing silica layer is subjected to a nitrogen plasma treatment or NH₃ plasma treatment, so that the treated fluorine-containing silica layer comprises 3-50 atom% of nitrogen and 0.5-10 atom% of fluorine.

30(original). The structure according to claim 25, wherein the LPD silica layer has a thickness between 10 to 30 nm.

31(original). The structure according to claim 25, wherein a summation of the thickness of the first dielectric layer and the thickness of the second dielectric layer are between 800 to 1200 nm.

32(new). A sandwich dielectric structure having a reduced thick film stress consisting of:

a first dielectric layer having a thickness between 100 to 700 nm formed on a substrate;

a liquid-phase-deposition (LPD) silica layer having a thickness between 5 to 100 nm formed on the first dielectric layer; and

a second dielectric layer having a thickness between 100 to 700 nm formed on the liquid phase deposited (LPD) silica layer.

33(new). The structure according to claim 32, wherein said first dielectric layer and said second dielectric layer are a low-K dielectric material of methyl silsesquioxane (MSQ), or hydrogen silsesquioxane (HSQ).

34(new). The structure according to claim 33, wherein said first dielectric layer and said second dielectric layer are methyl silsesquioxane (MSQ).

35(new). The structure according to claim 32, wherein said LPD silica layer is a fluorine-containing silica layer comprising 6-10 atom% of fluorine.

36(new). The structure according to claim 35, wherein said LPD silica layer is a fluorine-containing silica layer and said fluorine-containing silica layer is subjected to a nitrogen plasma treatment or NH₃ plasma treatment, so that the treated fluorine-containing silica layer comprises 3-50 atom% of nitrogen and 0.5-10 atom% of fluorine.

37(new). The structure according to claim 32, wherein the LPD silica layer has a thickness between 10 to 30 nm.

38(new). The structure according to claim 32, wherein a summation of the thickness of the first dielectric layer and the thickness of the second dielectric layer are between 800 to 1200 nm.

39(new). A sandwich dielectric structure having a reduced thick film stress comprising:

a first dielectric layer having a thickness between 100 to 700 nm formed on and contiguous with a substrate;

a liquid-phase-deposition (LPD) silica layer having a thickness between 5 to 100 nm formed on and contiguous with the first dielectric layer; and

a second dielectric layer having a thickness between 100 to 700 nm formed on and contiguous with the liquid phase deposited (LPD) silica layer.

40(new). The structure according to claim 39, wherein said first dielectric layer and said second dielectric layer are a low-K dielectric material of methyl silsesquioxane (MSQ), or hydrogen silsesquioxane (HSQ).

41(new). The structure according to claim 40, wherein said first dielectric layer and said second dielectric layer are methyl silsesquioxane (MSQ).

42(new). The structure according to claim 39, wherein said LPD silica layer is a fluorine-containing silica layer comprising 6-10 atom% of fluorine.

43(new). The structure according to claim 42, wherein said LPD silica layer is a fluorine-containing silica layer and said fluorine-containing silica layer is subjected to a nitrogen plasma treatment or NH₃ plasma treatment, so that the treated fluorine-containing silica layer comprises 3-50 atom% of nitrogen and 0.5-10 atom% of fluorine.

44(new). The structure according to claim 39, wherein the LPD silica layer has
a thickness between 10 to 30 nm.

45(new). The structure according to claim 39, wherein a summation of the
thickness of the first dielectric layer and the thickness of the second dielectric layer are
between 800 to 1200 nm.
